



AMENDMENTS TO THE CLAIMS

Claims 1-19 (Canceled)

Claim 20 (Currently Amended): An apparatus for the formation of a metal film, the apparatus comprising:

precursor feeding means for bringing a chlorine-containing raw material gas into contact with a hot metallic filament to produce a precursor within a chamber housing a substrate, the precursor comprising the metallic component contained in the metallic filament and the chlorine contained in the raw material gas;

reducing gas heating means for heating a hydrogen-containing reducing gas to a high temperature and thereby producing an atomic reducing gas ~~within~~, and for injecting the atomic reducing gas into the chamber between the substrate and the precursor feeding means; and

chamber heating means for heating an inner wall of the chamber to a predetermined temperature;

whereby the precursor is passed through the atomic reducing gas within the chamber to remove chlorine from the precursor by reduction, without allowing the precursor to deposit on the heated inner wall of the chamber, and the resulting metallic ion is directed onto the substrate to form a metal film on the substrate.

Claims 21-38 (Canceled)

Claim 39 (New): The apparatus according to Claim 20, wherein the metallic filament comprises at least one selected from the group consisting of Cu, Ag, Au, Pt, Ti and W.

Claim 40 (New): The apparatus according to Claim 20, wherein the reducing gas heating means comprises a tungsten filament.

Claim 41 (New): The apparatus according to Claim 20, wherein the precursor feeding means comprises a flow controller to control a flow rate of the chlorine-containing raw material gas.

Claim 42 (New): The apparatus according to Claim 20, wherein the reducing gas heating means comprises a flow controller to control a flow rate of the hydrogen-containing reducing gas.

Claim 43 (New): The apparatus according to Claim 20, further comprising a direct-current power supply to supply electrical current to the metallic filament to produce the precursor.

Claim 44 (New): The apparatus according to Claim 20, further comprising a direct-current power supply to supply electrical current to the reducing gas heating means.

Claim 45 (New): The apparatus according to Claim 20, wherein the predetermined temperature of the inner wall of the chamber is higher than a temperature of the substrate.